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EXAMINER	
RASHID, DAVID	

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2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/519,154	NOMURA ET AL.	
	Examiner	Art Unit	
	DAVID P. RASHID	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 December 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Table of Contents

Amendments & Claim Status

[1] This office action is responsive to Amendment and Response to Non-Final Office Action received on Dec. 12, 2008. Claims 1-2 and 4-10 remain pending.

Drawings

[2] The replacement drawings were received on Dec. 12, 2008 and are acceptable. In response to the Amendments to the Drawings received on Dec. 12, 2008, the previous drawing objections are withdrawn.

Claim Rejections - 35 U.S.C. § 112

[3] In response to the Amendments to the Claims received on Dec. 12, 2008, the previous § 112 rejections are withdrawn.

Claim Rejections - 35 U.S.C. § 101

[4] In response to the Amendments to the Claims received on Dec. 12, 2008, the previous § 101 rejections are withdrawn.

Response to Arguments

[5] Applicant's Remarks/Arguments filed Dec. 12, 2008 with respect to claims 1-2 and 4-10 have been respectfully and fully considered, but are moot in view of the new grounds of rejection.

Summary of Remarks regarding Rejections under 35. U.S.C. § 103

> Suzuki, however, does not disclose or suggest that the background subtractors 212-213 and the voxel calculator 224 "generates image data of an image viewed from a viewpoint in conformity with the request information," as recited in claim 1.
>
> ...
>
> Therefore, in Suzuki, "generation of image data of an image viewed from a viewpoint in conformity with the request information," is, at best, done by the renderor 242, provided in a client device (and not in a server as in the present invention), in response to the perspective selection 244.
>
> ...
>
> Applicants submit, however, that item 244 (unique perspective selection) is only used in a renderor 242 (col. 9, lines 43-45), and is not transmitted to item 230 (intemet). Therefore, Suzuki neither discloses nor suggests the claimed "request information transmitting unit that transmits the request information to the network" *(emphasis added),* of the present invention.
>
> ...
>
> Gadh merely discloses a display means for displaying image data.
>
> In view of this, even assuming that Suzuki and Gadh can be combined, which Applicants do not admit, one skill in the art would, at best modify the system disclosed by Suzuki by providing a display unit, and would not conceive the foregoing features of the present invention.

Remarks/Arguments at 27-29.

Applicant's arguments with respect to claims 1-2 and 4-10 have been considered but are moot in view of the new ground(s) of rejection of *Suzuki et al.* first embodiment (fig. 1) as the primary reference (as opposed to fig. 2 of *Suzuki et al.* as the primary reference in the previous action). *Suzuki et al.* at fig. 1 performs rendering image data in compliance with a user's "perspective" request before sending appropriate images through a network (fig. 2 performed rendering after images are sent though a network).

Claim Rejections - 35 U.S.C. § 102

[6] The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Suzuki et al.

[7] **Claims 2** is rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,573,912 (filed Nov. 7, 2000, hereinafter "Suzuki et al.").

Regarding **claim 2**, *Suzuki et al.* discloses an image data transmitting apparatus (fig. 1), comprising:

a request information receiving unit (fig. 1, item 148) that receives client's request information ("the user information and requests are returned by a signal 148. . ." at 9:24-26) transmitted by way of a network ("Internet" at fig. 1);

a request information analyzing unit (fig. 1, item 142) that analyzes (fig. 1, item 150) the request information received by the request information receiving unit;

a multiple viewpoint image supply unit (fig. 1, item 132) which selects necessary image data from coded and stored multiple viewpoint image data (fig. 1, items 134-136) of images taken by a plurality of cameras (fig. 1, items 106-108), based on viewpoint information ("interpolated novel viewpoints" at 9:4-6) from the request information analyzed by the request information analyzing unit (fig. 1, item 142) and decodes and supplies selected data;

an image generating unit (fig. 1, item 132) which, based on image data supplied from the multiple viewpoint image supplying unit, generates image data of an image (fig. 1, item 138, 140) viewed from a viewpoint in conformity with the request information;

an image synthesizing unit (fig. 1, item 142) that synthesizes (synthesizing in that "142 selects only those signals 134-140, voxel, and rendering information necessary to support a particular network connection" at 9:18-20) a plurality of images data (fig. 1, item 138, 140) generated by the image generating unit, based on display unit information ("interpolated novel viewpoints" at 9:4-6 will determine what is to be displayed on the user's computer, thus display unit information) from the request information;

an coding unit (fig. 1, item 146) that encodes ("with Microsoft WINDOWS-NT, ACTIVE SERVER PAGES (ASP), and Internet Information Server (IIS)" at 9:20-21) image data (fig. 1, item 138, 140) synthesized by the image synthesizing unit (fig. 1, item 142); and

a transmitting unit (fig. 1, item 146) that transmits the encoded image data (fig. 1, item 138, 140) to the network ("Internet" at fig. 1).

Claim Rejections - 35 U.S.C. § 103

[8] The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Suzuki et al. in view of Suzuki et al. and Gadh et al.

[9] **Claims 1** and **4** are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Suzuki et al.* in view of *Suzuki et al.* and U.S. Patent No. 6,525,732 (filed Feb. 17, 2000, hereinafter "Gadh et al.").

Regarding **claim 1**, while *Suzuki et al.* discloses an image data transmitting system (fig. 1), comprising:

an image data transmitting apparatus (fig. 1) that includes,

a request information receiving unit (fig. 1, item 148) that receives client's request information ("the user information and requests are returned by a signal 148. . ." at 9:24-26) transmitted by way of a network ("Internet" at fig. 1);

a request information analyzing unit (fig. 1, item 142) that analyzes (fig. 1, item 150) the request information received by the request information receiving unit;

a multiple viewpoint image supply unit (fig. 1, item 132) which selects necessary image data from coded and stored multiple viewpoint image data (fig. 1, items 134-136) of images taken by a plurality of cameras (fig. 1, items 106-108), based on viewpoint information ("interpolated novel viewpoints" at 9:4-6) from the request information analyzed by the request information analyzing unit and decodes and supplies selected data;

an image generating unit (fig. 1, item 132) which, based on image data supplied from the multiple viewpoint image supplying unit, generates image data of an image (fig. 1, item 138, 140) viewed from a viewpoint in conformity with the request information;

an image synthesizing unit (fig. 1, item 142) that synthesizes (synthesizing in that "142 selects only those signals 134-140, voxel, and rendering information necessary to support a particular network connection" at 9:18-20) a plurality of images data (fig. 1, item 138, 140) generated by the image generating unit, based on display unit information ("interpolated novel viewpoints" at 9:4-6 will determine what is to be displayed on the user's computer, thus display unit information) from the request information;

an coding unit (fig. 1, item 146) that encodes ("with Microsoft WINDOWS-NT, ACTIVE SERVER PAGES (ASP), and Internet Information Server (IIS)" at 9:20-21) image data (fig. 1, item 138, 140) synthesized by the image synthesizing unit (fig. 1, item 142); and

a transmitting unit (fig. 1, item 146) that transmits the encoded image data (fig. 1, item 138, 140) to the network ("Internet" at fig. 1), *Suzuki et al.* does not disclose an image data receiving apparatus that includes, a receiving unit that receives the encoded image data via the network, a decoding unit that decodes the encoded image data received by the receiving unit, an image processing unit that processes the decoded image data so as to be displayable on a display unit, the display unit displaying image data processed by the image processing unit, a request information input unit that allows input of the client's request information, and a request information transmitting unit that transmits the request information to the network.

Suzuki et al. teaches a "second virtual telepresent Internet system embodiment" (fig. 2) that includes

a receiving unit (fig. 2, item 232) that receives encoded image data (input into item 228) via a network (fig. 2, item 230),

a decoding unit (fig. 2, item 232) that decodes encoded image data (input into item 228) received by the receiving unit (fig. 2, item 232),

an image processing unit (fig. 2, item 242) that processes the decoded image data (input into item 228);

a request information input unit (fig. 2, item 242) that allows input of the client's request information (fig. 2, item 244), and

a request information transmitting unit (fig. 2, item 232) that transmits the request information (fig. 2, item 244) to the network (fig. 2, item 230).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the image data distribution system (fig. 1) of *Suzuki et al.* to include an image data receiving apparatus that includes, a receiving unit that receives the encoded image data via the network, a decoding unit that decodes the encoded image data received by the receiving unit, an image processing unit that processes the decoded image data, a request information input unit that allows input of the client's request information, and a request information transmitting unit that transmits the request information to the network as taught by *Suzuki et al.* since system 200 distributes the rendering task to each network client. In some applications there could be thousands of independent network clients 232 all asking for the same data from a single network server 228. Each client could be asking for a unique perspective selection 244 provided by its respective user, so this architecture avoids rendering bottlenecks." *Suzuki et al.* at 9:47-53.

Gadh et al. teaches a display unit ("[t]he object's image can then be transmitted for display by a client computer over a client-server network" at 2:3-7) displaying image data processed by an image processing unit (1:59-2:2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the image data distribution system of *Suzuki et al.* in further view of *Suzuki et al.* to include a display unit for displaying image data processed by the image processing unit as taught by *Gadh et al.* so that "the user may issue commands to manipulate the object so as to accurately simulate manipulation of the actual three-dimensional object. The client computer may display the object's image from one of the viewpoints. If the user then wishes to manipulate the object,

the user will issue a command to the server to index from the coordinates of the first viewpoint to the coordinates of some adjacent viewpoint(s). The images of the adjacent viewpoints will then be displayed in a sequence corresponding to the order in which the coordinates of the viewpoints are indexed. As an example, the user may "rotate" the virtual object by indexing about the coordinates of viewpoints encircling the object, and images of the viewpoints at these coordinates will be displayed to the user in succession. To the user, this may appear as an animated view of the rotating three-dimensional object, or of a rotating three-dimensional model of the object, even though the display is rendered solely from two-dimensional images." *Gadh et al.* at 2:4-22.

Regarding **claim 4**, *Suzuki et al.* in view of *Suzuki et al.* and *Gadh et al.* does not disclose further comprising a management information adding means for adding management information for enabling access to the image data of individual viewpoints and random access, to the multiple viewpoint image data.

Gadh et al. teaches a management information adding means (the element responsible for adding management information) for adding management information ("the viewpoint's coordinates about the object" at 1:59-63) for enabling access to the image data of individual viewpoints and random access ("issu[ing] a command to the server to index from the coordinates of the first viewpoint to the coordinates of some adjacent viewpoint(s)" at 2:3-22, *emphasis added*), to the multiple viewpoint image data ("some adjacent viewpoint(s)" at 2:3-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the image data distribution system of *Suzuki et al.* in view of *Suzuki et al.* and *Gadh et al.* to include a management information adding means for adding management information for enabling access to the image data of individual viewpoints and random access, to the multiple viewpoint image data as taught by *Gadh et al.* so that "the user may "rotate" the virtual object by indexing about the coordinates of viewpoints encircling the object, and images of the viewpoints at these coordinates will be displayed to the user in succession. To the user, this may appear as an animated view of the rotating three-dimensional object, or of a rotating three-dimensional model of the object, even though the display is rendered solely from two-dimensional images." *Gadh et al.* at 2:3-22.

Suzuki et al. in view of Gadh et al.

[10] **Claim 5** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Suzuki et al.* in view of *Gadh et al.*

Regarding **claim 5**, claim 4 recites identical features as in claim 5. Thus, references/arguments equivalent to those for claim 4 are equally applicable to claim 5.

Suzuki et al. in view of Suzuki et al. and Melen et al.

[11] **Claims 6** and **8** are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Suzuki et al.* in view of *Suzuki et al.* and U.S. Patent No. 6,631,205 (issued Oct. 7, 2003, hereinafter "Melen et al.").

Regarding **claim 6**, while *Suzuki et al.* discloses an image data transmitting system (fig. 1), comprising:

an image data transmitting apparatus (fig. 1) that includes,

a request information receiving unit (fig. 1, item 148) that receives client's request information ("the user information and requests are returned by a signal 148. . ." at 9:24-26) transmitted by way of a network ("Internet" at fig. 1);

a request information analyzing unit (fig. 1, item 142) that analyzes (fig. 1, item 150) the request information received by the request information receiving unit;

a multiple viewpoint image supply unit (fig. 1, item 132) which selects necessary image data from coded and stored multiple viewpoint image data (fig. 1, items 134-136),

an image generating unit (fig. 1, item 132) which, based on viewpoint information ("interpolated novel viewpoints" at 9:4-6) from the request information analyzed (fig. 1, item 150) by the request information analyzing unit (fig. 1, item 142), receives input of necessary image data (fig. 1, items 134-136) from the multiple viewpoint image supply unit (fig. 1, item 132) and generates image data of an image viewed from a viewpoint in conformity (fig. 1, items 138, 140) with the request information ("the user information and requests are returned by a signal 148. . ." at 9:24-26),

an image synthesizing unit (fig. 1, item 142) that synthesizes (synthesizing in that "142 selects only those signals 134-140, voxel, and rendering information necessary to support a particular network connection" at 9:18-20) a plurality of images data (fig. 1, item 138, 140)

generated by the image generating unit, based on display unit information ("interpolated novel viewpoints" at 9:4-6 will determine what is to be displayed on the user's computer, thus display unit information) from the request information;

an coding unit (fig. 1, item 146) that encodes ("with Microsoft WINDOWS-NT, ACTIVE SERVER PAGES (ASP), and Internet Information Server (IIS)" at 9:20-21) image data (fig. 1, item 138, 140) synthesized by the image synthesizing unit (fig. 1, item 142); and

a transmitting unit (fig. 1, item 146) that transmits the encoded image data (fig. 1, item 138, 140) to the network ("Internet" at fig. 1), *Suzuki et al.* does not disclose an image data receiving apparatus that includes, a receiving unit that receives the encoded image data via the network, a decoding unit that decodes the encoded image data received by the receiving unit, an image processing unit that processes the decoded image data so as to be displayable on a display unit, the display unit displaying image data processed by the image processing unit, a request information input unit that allows input of the client's request information, a request information transmitting unit that transmits the request information to the network, and a judgment unit that judges whether the received image data is of two-dimensional image data or stereoscopic image data.

Suzuki et al. teaches a "second virtual telepresent Internet system embodiment" (fig. 2) that includes

a receiving unit (fig. 2, item 232) that receives encoded image data (input into item 228) via a network (fig. 2, item 230),

a decoding unit (fig. 2, item 232) that decodes encoded image data (input into item 228) received by the receiving unit (fig. 2, item 232),

an image processing unit (fig. 2, item 242) that processes the decoded image data (input into item 228);

a request information input unit (fig. 2, item 242) that allows input of the client's request information (fig. 2, item 244), and

a request information transmitting unit (fig. 2, item 232) that transmits the request information (fig. 2, item 244) to the network (fig. 2, item 230).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the image data distribution system (fig. 1) of *Suzuki et al.* to include an image data

receiving apparatus that includes, a receiving unit that receives the encoded image data via the network, a decoding unit that decodes the encoded image data received by the receiving unit, an image processing unit that processes the decoded image data, a request information input unit that allows input of the client's request information, and a request information transmitting unit that transmits the request information to the network as taught by *Suzuki et al.* since system 200 distributes the rendering task to each network client. In some applications there could be thousands of independent network clients 232 all asking for the same data from a single network server 228. Each client could be asking for a unique perspective selection 244 provided by its respective user, so this architecture avoids rendering bottlenecks." *Suzuki et al.* at 9:47-53.

Melen et al. teaches a display unit displaying image data (fig. 4b, item 448) processed by an image processing unit ("computer implemented method for displaying a stereoscopic image" at 2:59-60); and a judgment unit (unit for performing check item 436 at fig. 4b) that judges whether the received image data is of two-dimensional image data or stereoscopic image data ("[i]f there is no stereoscopic indicator 302 in the definition of the image, the image is a 2D or non-stereoscopic image" at 10:43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the image data distribution system of *Suzuki et al.* to include a display unit displaying image data processed by the image processing unit; and a judgment unit that judges whether the received image data is of two-dimensional image data or stereoscopic image data (i.e., placing metadata item 302 for check item 436 to make the judgment) as taught by *Melen et al.* to "solve[[s]] the foregoing problems [given at 1:18-2:42] by providing a system and method for representing and displaying a stereoscopic image (204) in a portable document format encoded file (112)." *Melen et al.* at 2:45-48.

Regarding **claim 8**, while *Suzuki et al.* discloses an image data transmitting system (fig. 1), comprising:

an image data transmitting apparatus (fig. 1) that includes,

a request information receiving unit (fig. 1, item 148) that receives client's request information ("the user information and requests are returned by a signal 148. . ." at 9:24-26) transmitted by way of a network ("Internet" at fig. 1);

a request information analyzing unit (fig. 1, item 142) that analyzes (fig. 1, item 150) the request information received by the request information receiving unit;

a multiple viewpoint image supply unit (fig. 1, item 132) which selects necessary image data from coded and stored multiple viewpoint image data (fig. 1, items 134-136),

an image generating unit (fig. 1, item 132) which, based on viewpoint information ("interpolated novel viewpoints" at 9:4-6) from the request information analyzed (fig. 1, item 150) by the request information analyzing unit (fig. 1, item 142), receives input of necessary image data (fig. 1, items 134-136) from the multiple viewpoint image supply unit (fig. 1, item 132) and generates image data of an image viewed from a viewpoint in conformity (fig. 1, items 138, 140) with the request information ("the user information and requests are returned by a signal 148. . ." at 9:24-26),

an image synthesizing unit (fig. 1, item 142) that synthesizes (synthesizing in that "142 selects only those signals 134-140, voxel, and rendering information necessary to support a particular network connection" at 9:18-20) a plurality of images data (fig. 1, item 138, 140) generated by the image generating unit, based on display unit information ("interpolated novel viewpoints" at 9:4-6 will determine what is to be displayed on the user's computer, thus display unit information) from the request information;

a coding unit (fig. 1, item 146) that encodes ("with Microsoft WINDOWS-NT, ACTIVE SERVER PAGES (ASP), and Internet Information Server (IIS)" at 9:20-21) image data (fig. 1, item 138, 140) synthesized by the image synthesizing unit (fig. 1, item 142); and

a transmitting unit (fig. 1, item 146) that transmits the encoded image data (fig. 1, item 138, 140) to the network ("Internet" at fig. 1), *Suzuki et al.* does not disclose an image data receiving apparatus that includes, a receiving unit that receives the encoded image data via the network, a decoding unit that decodes the encoded image data received by the receiving unit, an image processing unit that processes the decoded image data so as to be displayable on a display unit, the display unit displaying image data processed by the image processing unit, a request information input unit that allows input of the client's request information, a request information transmitting unit that transmits the request information to the network, and an identification adding unit that adds to the image data to be transmitted a piece of information that indicates whether the image data is of two-dimensional image data or stereoscopic image data.

Suzuki et al. teaches a "second virtual telepresent Internet system embodiment" (fig. 2) that includes

a receiving unit (fig. 2, item 232) that receives encoded image data (input into item 228) via a network (fig. 2, item 230),

a decoding unit (fig. 2, item 232) that decodes encoded image data (input into item 228) received by the receiving unit (fig. 2, item 232),

an image processing unit (fig. 2, item 242) that processes the decoded image data (input into item 228);

a request information input unit (fig. 2, item 242) that allows input of the client's request information (fig. 2, item 244), and

a request information transmitting unit (fig. 2, item 232) that transmits the request information (fig. 2, item 244) to the network (fig. 2, item 230).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the image data distribution system (fig. 1) of *Suzuki et al.* to include an image data receiving apparatus that includes, a receiving unit that receives the encoded image data via the network, a decoding unit that decodes the encoded image data received by the receiving unit, an image processing unit that processes the decoded image data, a request information input unit that allows input of the client's request information, and a request information transmitting unit that transmits the request information to the network as taught by *Suzuki et al.* since system 200 distributes the rendering task to each network client. In some applications there could be thousands of independent network clients 232 all asking for the same data from a single network server 228. Each client could be asking for a unique perspective selection 244 provided by its respective user, so this architecture avoids rendering bottlenecks." *Suzuki et al.* at 9:47-53.

Melen et al. teaches a display unit displaying image data (fig. 4b, item 448) processed by an image processing unit ("computer implemented method for displaying a stereoscopic image" at 2:59-60); and an identification information adding unit (the unit for adding fig. 3b, item 302) that adds to received image data (fig. 3b, items 110a-b) a piece of information that indicates whether the image data is of two-dimensional image data or stereoscopic image data ("[i]f there is no stereoscopic indicator 302 in the definition of the image, the image is a 2D or non-stereoscopic image" at 10:43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the image data distribution system of *Suzuki et al.* to include a display unit displaying image data processed by the image processing unit; and an identification information adding unit that adds to the received image data a piece of information that indicates whether the image data is of two-dimensional image data or stereoscopic image data (i.e., placing metadata item 302 for check item 436 to make the judgment) as taught by *Melen et al.* to "solve[[s]] the foregoing problems [given at 1:18-2:42] by providing a system and method for representing and displaying a stereoscopic image (204) in a portable document format encoded file (112)." *Melen et al.* at 2:45-48.

Suzuki et al. in view of Melen et al.

[12] **Claims 7** and **9-10** are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Suzuki et al.* in view of *Melen et al.*

Regarding **claim 7**, while *Suzuki et al.* discloses an image data receiving apparatus ("second virtual telepresent Internet system embodiment" at fig. 2) that includes

a receiving unit (fig. 2, item 232) that receives, by way of network (fig. 2, item 230), coded image data (input into item 232 received from 228) of an image viewed from a viewpoint in conformity (fig. 2, item 240; in conformity in that the stored data items 234-236 received construct said viewpoint in conformity) with client's request information (fig. 2, item 244) transmitted by way of a network (fig. 2, item 230);

a decoding unit (fig. 2, item 232) that decodes encoded image data (input into item 228) received by the receiving unit (fig. 2, item 232),

an image processing unit (fig. 2, item 242) that processes the decoded image data (input into item 228),

a request information input unit (fig. 2, item 242) that allows input of the client's request information (fig. 2, item 244), and

a request information transmitting unit (fig. 2, item 232) that transmits the request information (fig. 2, item 244) to the network (fig. 2, item 230), *Suzuki et al.* does not teach (i) the display unit displaying image data processed by the image processing unit; and (ii) a judgment

unit that judges whether the received image data is of two-dimensional image data or stereoscopic image data.

Melen et al. teaches a display unit displaying image data (fig. 4b, item 448) processed by an image processing unit ("computer implemented method for displaying a stereoscopic image" at 2:59-60); and a judgment unit (unit for performing check item 436 at fig. 4b) that judges whether the received image data is of two-dimensional image data or stereoscopic image data ("[i]f there is no stereoscopic indicator 302 in the definition of the image, the image is a 2D or non-stereoscopic image" at 10:43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the image data distribution system of *Suzuki et al.* to include a display unit displaying image data processed by the image processing unit; and a judgment unit that judges whether the received image data is of two-dimensional image data or stereoscopic image data (i.e., placing metadata item 302 for check item 436 to make the judgment) as taught by *Melen et al.* to "solve[[s]] the foregoing problems [given at 1:18-2:42] by providing a system and method for representing and displaying a stereoscopic image (204) in a portable document format encoded file (112)." *Melen et al.* at 2:45-48.

Regarding **claim 9**, while *Suzuki et al.* discloses an image data transmitting apparatus (fig. 1), comprising:

a request information receiving unit (fig. 1, item 148) that receives client's request information ("the user information and requests are returned by a signal 148. . ." at 9:24-26) transmitted by way of a network ("Internet" at fig. 1);

a request information analyzing unit (fig. 1, item 142) that analyzes (fig. 1, item 150) the request information received by the request information receiving unit;

a multiple viewpoint image supply unit (fig. 1, item 132) which selects necessary image data from coded and stored multiple viewpoint image data (fig. 1, items 134-136) of images taken by a plurality of cameras (fig. 1, items 106-108), based on viewpoint information ("interpolated novel viewpoints" at 9:4-6) from the request information analyzed by the request information analyzing unit and decodes and supplies selected data;

an image generating unit (fig. 1, item 132) which, based on image data supplied from the multiple viewpoint image supplying unit, generates image data of an image (fig. 1, item 138, 140) viewed from a viewpoint in conformity with the request information;

an image synthesizing unit (fig. 1, item 142) that synthesizes (synthesizing in that "142 selects only those signals 134-140, voxel, and rendering information necessary to support a particular network connection" at 9:18-20) a plurality of images data (fig. 1, item 138, 140) generated by the image generating unit, based on display unit information ("interpolated novel viewpoints" at 9:4-6 will determine what is to be displayed on the user's computer, thus display unit information) from the request information;

an coding unit (fig. 1, item 146) that encodes ("with Microsoft WINDOWS-NT, ACTIVE SERVER PAGES (ASP), and Internet Information Server (IIS)" at 9:20-21) image data (fig. 1, item 138, 140) synthesized by the image synthesizing unit (fig. 1, item 142); and

a transmitting unit (fig. 1, item 146) that transmits the encoded image data (fig. 1, item 138, 140) to the network ("Internet" at fig. 1), *Suzuki et al.* does not disclose an identification adding unit that adds to the image data to be transmitted a piece of information that indicates whether the image data is of two-dimensional image data or stereoscopic image data.

Melen et al. teaches an identification information adding unit (the unit for adding fig. 3b, item 302) that adds to received image data (fig. 3b, items 110a-b) a piece of information that indicates whether the image data is of two-dimensional image data or stereoscopic image data ("[i]f there is no stereoscopic indicator 302 in the definition of the image, the image is a 2D or non-stereoscopic image" at 10:43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the image data distribution system of *Suzuki et al.* to include an identification information adding unit that adds to the received image data a piece of information that indicates whether the image data is of two-dimensional image data or stereoscopic image data (i.e., placing metadata item 302 for check item 436 to make the judgment) as taught by *Melen et al.* to "solve[[s]] the foregoing problems [given at 1:18-2:42] by providing a system and method for representing and displaying a stereoscopic image (204) in a portable document format encoded file (112)." *Melen et al.* at 2:45-48.

Regarding **claim 10**, while *Suzuki et al.* discloses an image data receiving apparatus ("second virtual telepresent Internet system embodiment" at fig. 2) that includes

a receiving unit (fig. 2, item 232) that receives, by way of network (fig. 2, item 230), coded image data (input into item 232 received from 228) of an image viewed from a viewpoint in conformity (fig. 2, item 240; in conformity in that the stored data items 234-236 received construct said viewpoint in conformity) with client's request information (fig. 2, item 244) transmitted by way of a network (fig. 2, item 230);

a decoding unit (fig. 2, item 232) that decodes encoded image data (input into item 228) received by the receiving unit (fig. 2, item 232),

an image processing unit (fig. 2, item 242) that processes the decoded image data (input into item 228),

a request information input unit (fig. 2, item 242) that allows input of the client's request information (fig. 2, item 244), and

a request information transmitting unit (fig. 2, item 232) that transmits the request information (fig. 2, item 244) to the network (fig. 2, item 230), *Suzuki et al.* does not teach (i) the display unit displaying image data processed by the image processing unit; and (ii) an identification information adding unit that adds to the received image data a piece of information that indicates whether the image data is of two-dimensional image data or stereoscopic image data.

Melen et al. teaches a display unit displaying image data (fig. 4b, item 448) processed by an image processing unit ("computer implemented method for displaying a stereoscopic image" at 2:59-60); and an identification information adding unit (the unit for adding fig. 3b, item 302) that adds to received image data (fig. 3b, items 110a-b) a piece of information that indicates whether the image data is of two-dimensional image data or stereoscopic image data ("[i]f there is no stereoscopic indicator 302 in the definition of the image, the image is a 2D or non-stereoscopic image" at 10:43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the image data distribution system of *Suzuki et al.* to include a display unit displaying image data processed by the image processing unit; and an identification information adding unit that adds to the received image data a piece of information that indicates whether the

image data is of two-dimensional image data or stereoscopic image data (i.e., placing metadata item 302 for check item 436 to make the judgment) as taught by *Melen et al.* to "solve[[s]] the foregoing problems [given at 1:18-2:42] by providing a system and method for representing and displaying a stereoscopic image (204) in a portable document format encoded file (112)." *Melen et al.* at 2:45-48.

Conclusion

[13] Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

[14] Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID P. RASHID whose telephone number is (571)270-1578 and fax number (571)270-2578. The examiner can normally be reached Monday - Friday 7:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David P. Rashid/
Examiner, Art Unit 2624

/Bhavesh M Mehta/
Supervisory Patent Examiner, Art Unit 2624

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